

**Date:** March 5, 2013

**To:** Thomas J. Bonfield, City Manager  
**Through:** W. Bowman Ferguson, Deputy City Manager  
**From:** Marvin G. Williams, Director of Public Works  
**Subject:** 2013 Pavement Condition Survey of the City of Durham Street System

### **Executive Summary**

On February 13, 2012, a Request for Qualifications (RFQ) was issued to provide a Pavement Condition Survey of the City of Durham Street System. Statements of Qualifications were provided on March 15, 2012 by five (5) professional engineering firms. Subsequent to the receipt of the Statements of Qualifications, the Director of Public Works decided to delay the selection process until after the beginning of the new fiscal year (July 2012.)

On August 9, 2012 the five firms which submitted Statements of Qualification's were contacted and asked if they still wanted to be considered for the project. Three firms responded affirmatively; 1) AECOM, 2) AMEC, Inc. and 3) Transmap Corporation. Each firm was invited to give presentations about their qualifications to the City staff on the selection committee.

Following the consultant presentations, members of the selection committee visited the Public Works Department of the City of Wilmington to review the work provided to Wilmington by AMEC in 2006 and Transmap in 2011. Following the Wilmington visit, the selection committee unanimously recommended that Transmap be selected for the project based on Wilmington's satisfaction with their work and Transmap's technical capabilities and long tenure (since 1994) providing these services to other cities and transportation departments across the country.

A meeting was conducted with Transmap on February 11, 2013 in which the requirements for the proposed service contract were discussed in detail. Further negotiations resulted in a fee in the amount of \$257,498.04. The scope of services includes not only the data collection and evaluation of the pavement condition of the 697 centerline miles of streets and 5 centerline miles of alleys, but also an evaluation of the condition of the sidewalks and curb-ramps.

### **Recommendation**

The Administration recommends that the City Council authorize the City Manager to execute a contract for the Pavement Condition Survey of the City of Durham Street System with Transmap Corporation of Upper Arlington, Ohio, in the amount of \$257,498.04; establish a contingency fund in the amount of \$25,749.80 (10%); and authorize the City Manager to execute change orders to the contract so long as the total project cost does not exceed \$283,247.84.

## **Background**

The last pavement condition survey of the City streets was completed in 2007. The repaving of the City streets that was performed beginning in 2007 through 2012 addressed all of the streets that were rated in 2007 as being in “Very Poor” or “Poor”.

During the period of time since 2007 the streets that were previously rated as “Fair”, “Good” or “Very Good” have experienced additional wear and natural deterioration; they have not received any attention because the focus has been to pave the worst streets first. Since the repaving projects have cleared the backlog of “poor” streets this is the ideal time to re-survey the pavement condition of the City streets in order to develop strategies for pavement preservation that will prolong the life of street surface.

The proposed “Pavement Condition Survey of the City of Durham Street System” will provide a Pavement Condition Index (PCI) on a scale from 1-100 for every street and alley in the City network. This methodology, fully described in standards published by the American Society for Testing and Materials (ASTM Standard D6433-11), is widely used across the country and is based on industry standard methods developed in partnership between the Federal Highway Administration (FHWA), Federal Aviation Administration (FAA) and the American Public Works Association (APWA).

There is an array of pavement preservation technologies such as micro-surfacing, slurry sealing, pavement rejuvenation, and crack sealing which are less expensive than repaving and serve to prolong the life of the pavement before repaving and/or reconstruction is required. The choice about which of these technologies is most appropriate on any given street is dependent on its condition. The PCI study by nature of the protocol employed will provide the City with specific recommendations for which pavement preservation technology is most appropriate on a street-by-street basis.

The deliverables from the project will include a five-year plan for the application of the low cost pavement preservation technologies on the City Streets where appropriate based on their PCI ratings. It will also identify those streets, if any, for which pavement preservation is not applicable and re-paving or reconstruction is necessary. These plans are key not only to providing the Public Works Department with an indication of the funding necessary to maintain the streets in good condition, but also as a foundation for the annual work plan in the prioritization of the work to be performed.

As mentioned in the executive summary, the scope of services for this project includes not only the data collection and evaluation of the pavement condition of the streets and alleys, but also an evaluation of the condition of the sidewalks and curb-ramps. The principal means by which the data are collected for the PCI survey is through a series of photographs collected continuously along the streets by a sophisticated van. The photographs span the entire width of the street and include the pavement, curb and gutter, shoulder, sidewalk and the right-of-way.

The photographic data collection methodology for the PCI survey provides a low-cost opportunity to obtain the condition of the sidewalks at the same time. The cost for the PCI survey alone is \$235,194.04, and the incremental cost of obtaining the condition of the sidewalks and curb ramps is \$22,304.00.

### Issues/Analysis

The Public Works Department recommends awarding a contract for the Pavement Condition Survey of the City of Durham Street System with Transmap Corporation of Upper Arlington, Ohio, in the amount of \$257,498.04; establish a contingency fund in the amount of \$25,749.80 (10%). The contingency fund will be utilized to expand the scope of work with Transmap Corporation; to obtain additional detailed information on a select group of street segments during the course of the pavement condition survey. Transmap Corporation may be asked to identify various pavement recovery methods as an alternative to full street reconstruction on street segments that are rated as very poor or failing (e.g. full-depth reclamation, soil stabilization, in-place recycling, etc...).

### Alternatives

The Council can choose to not proceed with this project and defer the evaluation of the condition of the streets to the future.

The Department of Public Works has not identified any alternatives to this proposed study to evaluate the condition of the City streets in this thorough of a manner using the ASTM Standard Pavement Condition Index methodology. The Department has also not identified any low-cost alternative to have the condition of the sidewalks and curb ramps evaluated City-wide. The information obtained will provide the City with valuable and much-needed data for CIP planning for streets and sidewalks in the coming years, and to prepare street pavement preservation plans that more accurately reflect the existing conditions.

### Financial Impact

Funds for this project are budgeted for in the following accounts:

CIP Street Repaving	3610L980-731003-LE307	\$ 235,194.04
CIP Street Contingency	3610L980-731900-LE307	\$ 25,749.80
Sidewalk 2/3 Bonds	3610L990-731003-LF206	\$ <u>22,304.00</u>
	Total Contract	\$ 283,247.84

### SDBE SUMMARY

The Equal Opportunity/Equity Assurance Department reviewed the proposal submitted by Transmap Corporation of Upper Arlington, Ohio to determine compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting. The goals for this project were MSDBE 1% and WSDBE 1%. It was determined that Transmap is in compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting.

### SDBE REQUIREMENTS

Transmap will subcontract to the following certified firms:

Firm	ID	City/State	Amount	% of Contract
Bree & Associates, Inc.	MSDBE	Durham, NC	\$ 6,000.00	2.12%
SEPI Engineering & Construction	WSDBE	Raleigh, NC	\$ 6,060.00	2.14%

The MSDBE and WSDBE goals were exceeded.

## **WORKFORCE STATISTICS**

Workforce statistics for Transmap are as follows:

Total Workforce	12	
Total Females	1	(8%)
Total Males	11	(92%)
Black Males	1	(8%)
White Males	10	(84%)
Other Males	0	(0%)
Black Females	0	(0%)
White Females	1	(8%)
Other Females	0	(0%)